FILE 'MEDLINE, CANCERLIT, BIOTECHDS, EMBASE, BIOSIS' ENTERED AT 16:42:11
ON 14 OCT 2003

L1 540540 S ALCOHOL OR PVA OR ETHANOL
L2 130360 S MICROPARTICLE OR MICROCAPSULE OR MICROSPHERE OR NANOSPHERE OR
L3 46953 S ENCAPSULA?
L4 388 S L3 AND L2 AND L1
L5 252 DUP REM L4 (136 DUPLICATES REMOVED)
L6 205243 S AQUEOUS
L7 63 S L6 AND L5

=> s dna or nucleic or polynucleotide or plasmid
L8 2507479 DNA OR NUCLEIC OR POLYNUCLEOTIDE OR PLASMID

=> s l8 and l5
L9 34 L8 AND L5

=> d bib ab 1-34

L9 ANSWER 34 OF 34 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1995:118919 BIOSIS
DN PREV199598133219
TI Microencapsulation of **DNA** within alginate microspheres and crosslinked chitosan membranes for in vivo application.
AU Alaxakis, T.; Boadi, D. K.; Quong, D.; Groboillot, A.; O'Neill, I.; Poncelet, D.; Neufeld, R. J. (1)
CS (1) Dep. Chem. Eng., McGill Univ., 3480 University St., Montreal, PQ H3A 2A7 Canada
SO Applied Biochemistry and Biotechnology, (1995) Vol. 50, No. 1, pp. 93-106. ISSN: 0273-2289.
DT Article
LA English
AB Calf thymus **DNA** was microencapsulated within crosslinked chitosan membranes, or immobilized within chitosan-coated alginate microspheres. Microcapsules were prepared by interfacial polymerization of chitosan, and alginate microspheres formed by emulsification/internal gelation. Diameters ranged from 20 to 500 mu-m, depending on the formulation conditions. **Encapsulated DNA** was quantified in situ by direct spectrophotometry (260 nm) and ethidium bromide fluorimetry, and compared to **DNA** measurements on the fractions following disruption and dissolution of the microspheres. Approximately 84% of the **DNA** was released upon core dissolution and membrane disruption, with 12% membrane bound. The yield of **encapsulation** was 96%. Leakage of **DNA** from intact microspheres/capsules was not observed. **DNA** microcapsules and microspheres were recovered intact from rat feces following gavage and gastrointestinal transit. Higher recoveries (60%) and reduced shrinkage during transit were obtained with the alginate microspheres. **DNA** was recovered and purified from the microcapsules and microspheres by chromatography and differential precipitation with **ethanol**. This is the first report of microcapsules or microspheres containing biologically active material (**DNA**) being passed through the gastrointestinal tract, with the potential for substantial recovery.

L9 ANSWER 27 OF 34 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT/ISI on STN
AN 1997-06331 BIOTECHDS
TI Preparation of polyvinyl **alcohol** particles **encapsulating** a magnetic colloid; for use in e.g. **DNA** purification and **DNA** sequencing
AU Mueller-Schulte D
PA Muller-Schulte D
PI DE 19528029 6 Feb 1997
AI DE 1995-1028029 31 Jul 1995
PRAI DE 1995-1028029 31 Jul 1995
DT Patent
LA German
OS WPI: 1997-120040 [12]
AB A method for the preparation of pearl shaped or spherical particles of polyvinyl **alcohol** (**PVA**) is claimed, in which a magnetic colloid is **encapsulated** in aq. **PVA** at room temp. and where the **polymer** phase is immiscible with the organic phase. At least 2 emulsifiers are present and during stirring of the suspension, a water soluble agent containing reactive hydroxy groups is added. These particles are used to fractionate cells, **nucleic** acids, proteins, viruses or bacteria, as well as for **DNA** sequencing, immunoassay or **DNA** synthesis (claimed). Using these particles, separation is easier and saves time compared to other methods. (11pp)